

Remarks

The various parts of the Office Action (and other matters, if any) are discussed below under appropriate headings.

Restriction Requirement

Claim 11 has been cancelled without prejudice to Applicants' right to pursue the subject matter thereof in a divisional application.

Claim Rejections - 35 USC § 112

Although exception is taken to the allegation of alleged indefiniteness, claim 1 has been amended as suggested by the Examiner to include the growth rates previously set forth in claim 2. In addition, the term "preferably" has been deleted from the claims and the claims amended accordingly. The term "great" also has been deleted from claim 10. Consequently, the rejection is now moot in view of the changes that have been made.

Other Amendments

The claims also have been amended to place the preamble into a more customary form and to remove reference numbers.

Claim Rejections - 35 USC § 102 and § 103

The claims have been rejected as being unpatentable over US 6,943,136 ("Kwon") in view of US 5,248,649 ("Nagaishi"). Withdrawal of the rejection is respectfully requested for at least the following reasons.

Kwon discloses a method of improving superconducting properties of selected (Rare Earth)Ba₂Cu₃O₇ layers by adding a thin buffer layer (column 4, line 37+). The rate formation of the thin films or layers can be varied from about 0.01 nm/s to about 20 nm/s (column 4, line 25+). Kwon, however, has not been found to include even a hint that a thick superconducting layer of good quality (high T_c and high current density) could be deposited with a high growth rate after a thin buffer layer (of the same or similar material composition as the thick layer) has been grown very slowly on the substrate.

Nagaishi discloses a method for preparing a high-quality thin superconducting film of a Bi-Sr-Ca-Cu-O. According to Nagaishi the quality of this type of

superconducting layer can be improved by reducing its growth rate (0.05 nm/s) (col. 2, line 55+). But Nagaishi has not been found to include even a hint that a second layer could be grown on the slowly grown first layer with a higher deposition rate and still yield a good quality. There has not been found even an indication that a second layer is foreseen in Nagaishi. Additionally, the material composition of the superconducting film in Nagaishi is different from that set forth in the claims.

The Examiner argues that from Kwon a variation of the growth rate is known. According to the Examiner's argumentation, Kwon does not disclose changing the growth rate from low to high. Consequently, Kwon cannot disclose the effect of such a change on the quality of the second layer.

According to the Examiner, the deficiencies of Kwon are overcome by Nagaishi, but Nagaishi discloses that lowering, not raising, the growth rate results in a better quality of the superconducting layer. Thus, it follows that the combination being advanced by the Examiner, even if justified, directs the skilled person away from the method of claim 1. Therefore, the prior art rejection should be withdrawn.

Conclusion

In view of the foregoing, request is made for timely issuance of a notice of allowance.

Respectfully submitted,

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